REMARKS

The applicant respectfully requests reconsideration in view of the amendment and the following remarks. Support for amended claim 1 can be found in claim 1. No new matter has been added.

Claims 1-4, 7-9, and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshiyama (US 2003/0198831) in view of Hu (US 6,229,012). Claims 22, 24-26, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lupo (US 5,840,217). Claims 1-4, 8-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshiyama in view of Lupo. The applicant respectfully traverses these rejections.

Claims 1-4, 7.9, 13-21 in respect to Oshiyama in view of Hu

Claims 1-4, 7-9, and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshiyama in view of Hu. The Examiner stated at the bottom of page 3 to the top of page 4 of the Office Action,

> Oshiyama fails to mention a pyrimidine or triazine derivative which is a 9,9'-spirobifluorene derivative, a 9,9-disubstituted fluorene derivative, a 6,6- and/or 12,12-di- or tetrasubstituted indenofluorene derivative, a tetraarylmethane derivative or a triptycene derivative.

The Examiner relies upon the teaching of Hu for this disclosure. Hu discloses a fluorene derivative substituted with 1,3,5-triazine groups. The Examiner indicated in the middle of page 4 of the Office Action, that Hu discloses a 9,9-disubstitued fluorene derivative. Hu, however, does not disclose or suggest spirobifluorene, indenofluorene, tetraarylmethane or triptycene as is required by the applicant's amended claim 1. Therefore, this rejection should be withdrawn.

Claims 22, 24.26, 28-30 in respect to Lupo

Claims 22, 24-26, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lupo. According to the Examiner at page 9 o the Office Action, Lupo discloses spirobifluorene derivatives which are substituted by a large variety of different groups. From the formula L-la in Lupo, it might generally be possible to construct a 1,2,4-triazine, if the following conditions apply for the symbols and indices: n = 0 and m = 1 and X = N and Y = N and Z = CH=N. This means that in total five symbols and indices have to be selected in a very specific manner to result in a substituent, which is a 1,2,4-triazine. The Examiner will note at cols. 12 and 13, Lupo discloses specific substitutes for the spirobifluorene derivatives. Not one of the substituents contains three nitrogens, let alone, not one of the substiutents is a triazine. These substituent groups embrace 1,2,4-triazine (even though 1,2,4-triazine is not explicitly disclosed, but is a selection from several lists).

The Examiner states further at the top of page 10 of the Office Action, that 1,2,3-triazine, 1,2,4-triazine and 1,3,5-triazine are known isomers and it would have been obvious to the person of ordinary skill in the art to use 1,3,5-triazine instead of 1,2,4-triazine. As mentioned above, 1,2,4-triazine is not explicitly disclosed by Lupo, but is only embraced by the general formula Therefore, first of all, the person or ordinary skill in the art would have no motivation whatsoever to construct a triazine from the formula disclosed by Lupo as Lupo explicitly suggests only other substituents.

"[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the

legal conclusion of obviousness." *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Furthermore, the Examiner cannot selectively pick and choose from the disclosed parameters without proper motivation as to a particular selection. The mere fact that a reference may be modified to reflect features of the claimed invention does not make the modification, and hence the claimed invention, obvious unless the prior art suggested the desirability of such modification. *In re Mills*, 916 F.2d 680, 682, 16 USPQ2d 1430 (Fed. Cir. 1990); *In re Fritch*, 23 USPQ2d 1780 (Fed. Cir. 1992). Thus, it is impermissible to simply engage in a hindsight reconstruction of the claimed invention where the reference itself provides no teaching as to why the applicant's combination would have been obvious. *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991).

Furthermore, even if the person of ordinary skill in the art used a spirobifluorene substituted with 1,2,4-triazine as embraced by Lupo as a hole blocking material in a hole blocking layer of a phosphorescent OLED, he would observe that this might give reasonable results in combination with deep red triplet emitters (depending on the triplet energy of the red triplet emitter), but results in quenching of the emission when used in combination with green triplet emitters. He would therefore not have any motivation to use a corresponding derivative with 1,3,5-triazine as there would be no reasonable expectation of success.

Enclosed is a declaration executed by Anja Gerhard which compares spirobifluorene derivatives substituted with 1 ,3,5-triazine and 1,2,4-triazine. As is evident from these calculations, the triplet energy of the 1,3,5-triazine is considerably higher than the triplet energy of the 1 ,2,4-triazine derivative. Therefore, the 1,3,5-triazine derivative would not result in

quenching when used in combination with a green triplet emitter. This is an unexpected result which could not have been predicted by the person of ordinary skill in the art. Therefore, this rejection should be withdrawn.

Claims 1-4, 8.10, 12-13 in respect to Oshiyama in view of Lupo

Claims 1-4, 8-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshiyama in view of Lupo. The Examiner stated at the top of page 12 of the Office Action,

> Oshiyama fails to mention a pyrimidine or triazine derivative which is a 9,9'-spirobifluorene derivative, a 9,9-disubstituted fluorene derivative, a 6,6- and/or 12,12-di- or tetrasubstituted indenofluorene derivative, a tetraarylmethane derivative or a triptycene derivative.

The Examiner relies upon the teaching of Lupo for this disclosure. Lupo is discussed above. The Examiner asserts at the top of page 13 of the Office Action, that the Lupo shows a 1,2,4-triazine but not a 1, 3,5-triazine. As stated above, from the formula L-la in Lupo, it might generally be possible to construct a 1,2,4-triazine, if the following conditions apply for the symbols and indices: n = 0 and m = 1 and X = N and Y = N and Z = CH=N. This means that in total five symbols and indices have to be selected in a very specific manner to result in a substituent, which is a 1,2,4-triazine. The Examiner will note at cols. 12 and 13, Lupo discloses specific substitutes for the spirobifluorene derivatives. Not one of the substituents contains three nitrogens, let alone, not one of the substiutents is a triazine. The Examiner will note that not one of the 106 spiro examples in Table 1 at columns 13 and 14, contain 3 nitrogens let alone a triazine as is required by the applicant's claimed invention. The Examiner will further note at cols. 16 and 17, Lupo discloses specific substitutes for the spirobifluorene derivatives. Not one

of the substituents contains three nitrogens, let alone, not one of the substiutents is a triazine. The Examiner will note that not one of the spiro examples in Table 2-5 (spiro 107-spiro 530) at columns 17 through 23, contain 3 nitrogens let alone a triazine as is required by the applicant's claimed invention. Out of the **530 examples,** there are no examples in Lupo that have the substituent as a triazine. The only groups, which are explicitly disclosed by Lupo are phenyl groups or five- membered heteroaromatic groups, such as oxazoles, but not even six-membered heteroaromatic groups in general are explicitly disclosed and in particular no six- membered heteroaromatic groups having two or three nitrogen atoms in the ring.

However, there is no possibility that a 1,3,5-triazine can be constructed by from this formula. The Examiner argues that 1,2,4-triazine and 1,3,5-triazine are considered as structural isomers having similar properties and that Lupo already discloses 1,2,4-triazine derivatives for use in OLEDs. As stated above, the applicant has enclosed a declaration showing the unexpected results of the 1,3,5-triazine compared to the 1,2,4-triazine.

A statement that modifications of the prior art to meet the claimed invention would have been "obvious to one of ordinary skill in the art at the time the invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).

The combination of Oshiyama with Lupo would therefore only be possible with a retrospective view having knowledge of the present invention and the person skilled in the art would have no motivation whatsoever to combine the disclosure of Oshiyama with the disclosure of Lupo.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 14113-00012-US from which the undersigned is authorized to draw.

Dated: December 30, 2010

Respectfully submitted,

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Enclosure: Declaration